

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH J. GEIB, WILLIAM J. JONES, RICHARD A. MAZUR,
DOUGLAS U. MENNIE, and GARY P. WATTS

Appeal No. 1999-1536
Application No. 08/938,592

HEARD: February 22, 2000

Before ABRAMS, STAAB, and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claim 49. Claims 51-54, the only other claims remaining in this application, stand allowed.

BACKGROUND

The appellants' invention relates to a coin sorter comprising a rotatable disc having a resilient upper surface, a stationary sorting head having a lower surface generally parallel to and spaced slightly from the upper surface of the disc and forming a plurality of coin denomination channels intersecting the periphery of the sorting head for sorting and discharging coins of different denominations radially outwardly from the upper surface of the disc so that the coins exit the disc horizontally, a coin sensor for sensing coins while they are on the disc, and a shunting mechanism. The shunting mechanism of the invention is disposed in a coin route extending from one of the exit channels to an associated coin-collecting container for separating coins discharged from said one of the exit channels into two or more batches. Claim 49, the only claim on appeal, is reproduced in the appendix to appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Black	3,795,252	Mar. 5, 1974
Ristvedt et al. (Ristvedt)	4,681,128	Jul. 21, 1987

The following rejection is before us for review¹.

¹ According to the examiner's answer (Paper No. 28, page 2), the rejection of claim 49 under the judicially created doctrine of double patenting set forth on page 4 of the examiner's Office action (Paper No. 18, mailed February 24, 1998) has been overcome by the filing of a terminal disclaimer on August 5, 1998 (Paper No. 26).

Claim 49 stands rejected under 35 U.S.C. § 103 as being unpatentable over Ristvedt in view of Black.

Reference is made to the main and reply briefs (Papers No. 27 and 30) and the answer (Paper No. 28) for the respective positions of the appellants and the examiner with regard to the merits of this rejection.

OPINION

In arriving at our decision on the obviousness issues raised in this appeal, we have given careful consideration to the appellants' specification and claims, the teachings of the applied prior art references, the evidence supplied by appellants, and the respective positions articulated by appellants and the examiner. Having reviewed all of the evidence before us, we make the determinations which follow.

Ristvedt discloses a coin sorter comprising a rotatable disc (turntable 38) having a resilient upper surface (pad 54) and a stationary sorting head 56 having a lower surface, best seen in Figure 4, configured with lands, including a basic or reference land L, and recesses which control the sorting process by forming a plurality of exit paths 180a-180f extending to the periphery of the sorting head. Sorting of coins is accomplished by the combination of the relationship between a plurality of pins 114a-114f and a tapered edge 112 on the lower surface of the sorting head. In particular, the distance between a pin and the edge 112 is preset to urge a particular diameter coin under and across the edge 112 under the force of the rotating pad 54

at such a location along the disc that the coin follows the appropriate path 180*a*-180*f* to exit at the appropriate location to enter the appropriate L-shaped fitting 206, tube 208, bag funnel 210 and bag 212 for that particular coin denomination.

Ristvedt is also provided with a coin counter 152 which counts each coin as it encounters the corresponding discrete one of the pins 114*a*-114*f* and keeps a coin count for each coin denomination. The coin counter is electrically connected to a solenoid 136 which, when actuated in response to the counter reaching a predetermined coin count for a particular coin denomination, raises a plate 120 on which the pins 114*a*-114*f* are mounted to move the pins to a raised position above the pad 54. Upon raising of the pins above the pad, sorting of any more coins is prevented and all residual coins traveling on the rotating pad pass in the direction of arrow 146, as shown in Figure 4, into an overflow receptacle 174. Thus, when the user desires to deposit only a selected number of coins of a particular denomination in a collection bag, the user can enter that selected number, by means of a button (not shown), to a comparator 164. After the coin counter 152 counts the preselected number of that particular denomination, the comparator outputs a signal to actuate the solenoid 136 to raise the pins to prevent further sorting and send all residual coins to the overflow receptacle 174.

Ristvedt lacks "a shunting mechanism, disposed in a coin route extending from one of said exit channels to an associated coin-collecting container, for separating the coins discharged from said one of said exit channels into two or more batches" as required by claim 49.

However, it is the examiner's position that it would have been obvious to one of ordinary skill in the art, in view of the teachings of Black, to provide Ristvedt with a shunting mechanism for switching between a plurality of coin-collecting bags (answer, page 4). Appellants (brief, page 4) argue that "there is no apparent reason why one would want to divide coins directed to the overflow receptacle 174 into two or more batches" and the examiner agrees (answer, page 4). However, it is apparent to us that a shunting mechanism for dividing coins directed to the overflow receptacle is not the modification proposed by the examiner (see answer, page 4). Rather, the examiner's proposed modification is directed to provision of a shunting mechanism for diverting sorted coins of a given denomination between a plurality of coin-collecting bags (212, for example) so that "the machine can continue operating when the target count is reached because the coins are shunted to a second bag" (answer, page 5).

Black discloses a centrifugal coin sorter comprising a stationary table 4 and a rotating disc 16 and unitary outer disc member 38 provided with a plurality of radially extending channels 46 through which coins move by centrifugal acceleration due to rotation of the discs. Each of the channels 46 is provided with one straight side and a plurality of pins 64. The pins are so spaced from the straight sides that the innermost pin will engage and arrest the largest coin, while the next smaller coin 68 continues radially therepast but is arrested by the next pin 64. The smaller the coin, the farther outwardly it will move in a channel 46 before being arrested by a pin 64 corresponding to the denomination of that coin (column 3, lines 27-34).

Once arrested, the coin will travel in a circumferential direction along the stationary table 4 until it reaches one of the elongated openings 78 disposed at the radial position of the arrested coin. As best seen in Figure 5, each coin, upon reaching an opening 78, is forcibly deflected downwardly by a deflecting finger 82. A counter device 104, actuated by a photocell 102 sensing interruption of a light beam from a light source 98 upon passage of a coin, counts the coins of each denomination as they pass through a flanged fitting 80 extending from the opening 78. A generally Y-shaped fitting 106 having a pair of tubular discharge portions 108 and 110 is secured to the flanged fitting 80. A predetermined "full count" may be entered into the counter 104 such that upon accumulation of the desired "full count" a current is sent to a solenoid 116 to swing a gate 120, normally urged by a spring 124 to the solid line position shown in Figure 5, to the dotted line position shown in Figure 5. In so doing, the gate is swung from a first position wherein the coins pass through the tubular discharge portion 110 into a first bag 112 to a second position wherein all subsequent coins are deflected laterally into the tubular discharge portion 108 to be deposited in a second bag or receiver 126. The solenoid 116 is maintained in the energized condition until the desired number of coins has been accumulated in the bag 126, at which time the current to the solenoid is shut off and the spring 124 urges the gate back to the solid line position. Thus, according to Black,

when the desired number of coins has been deposited in one receiver, the machine automatically stops delivering coins to that receiver and deflects them toward a second receiver and thus an operator is given an opportunity to remove the first receiver or bag 112 and replace it with an empty receiver during the

interval of time that coins are being collected in the second receiver [column 5, lines 4-11].

We do not agree with appellants' assertion (reply brief, page 2) that the examiner's proposed combination illustrates "impermissible use of hindsight." The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Indeed, a *prima facie* case of obviousness is established where the reference teachings would appear to be sufficient for one of ordinary skill in the art having those teachings before him to make the proposed combination or modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

From our viewpoint, Black teaches the desirability of providing a diverter or shunting mechanism in the coin path between the exit of the coin of a particular denomination from the sorting disc/head and an associated coin-collecting container, for diverting coins away from a first coin-collecting container toward a second coin-collecting container, when a particular coin count is reached, in order to give the operator an opportunity to replace the first (full) bag with another empty bag while coins of that particular denomination are collected in a second bag without interrupting the sorting function of the apparatus. While we recognize that Ristvedt does provide an overflow receptacle 174 to collect all residual coins after a predetermined

number of a particular coin denomination has been counted, we also note that residual coins collected in the overflow receptacle remain unsorted. As we see it, one of ordinary skill in the art aware of the teachings of both Ristvedt and Black would have appreciated that provision of a diverter or shunting mechanism in one or more of the coin paths defined by the fittings 206 and tubes 208 of Ristvedt as taught by Black to divert coins to a second collection bag for the same denomination coin would have offered the additional advantage of permitting residual coins to continue to be sorted while the full bag is replaced with an empty bag. Accordingly, in our opinion, the combined teachings of Ristvedt and Black would have been *prima facie* sufficient to have motivated one of ordinary skill in the art to provide such a shunting mechanism in the Ristvedt apparatus, either in addition to or in place of the solenoid 136 for raising the pins 114a-114f to stop sorting and divert residual coins to the overflow receptacle, to attain this advantage.

Having concluded, for the reasons discussed above, that the teachings of the applied references are sufficient to establish a *prima facie* case of obviousness² of the subject matter of claim 49, we recognize that evidence of secondary considerations, such as that presented by appellants in this application, must be considered en route to an ultimate determination of

² Like the Court in *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992), we recognize that the concept of a "prima facie" case of obviousness is a procedural tool of patent examination which allocates the burdens of going forward as between the examiner and the appellants, and that the determinative issue regarding patentability in this, and any case based on obviousness, is whether the record as a whole, by a preponderance of the evidence with due consideration to persuasiveness of argument and secondary evidence, supports the legal conclusion that the invention claimed would have been obvious at the time the invention was made to a person having ordinary skill in the art.

obviousness or nonobviousness under 35 U.S.C. § 103. Accordingly, we consider anew the issue of obviousness under 35 U.S.C. § 103, carefully evaluating and weighing both the evidence relied upon by the examiner and the evidence provided by appellants. See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) and Stratoflex Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983).

Appellants argue (brief, page 5; reply brief, page 4) that the passage of seven years from the issuance of the Ristvedt patent in 1987 (after the Black patent in 1974) until the filing of the appellants' grandparent application No. 08/201,350 in 1994 evidences that a problem existed for a long time and, thus, rebuts any assertion of obviousness of the subject matter of claim 49. However, it is well established that the mere age of the references is not persuasive of the unobviousness of the combination of their teachings, absent evidence that, notwithstanding knowledge of the references, the art tried and failed to solve the problem. In re Wright, 569 F.2d 1124, 1127, 193 USPQ 332, 335 (CCPA 1977); In re Neal, 481 F.2d 1346, 1347, 179 USPQ 56, 57 (CCPA 1973); In re McGuire, 416 F.2d 1322, 1327, 163 USPQ 417, 421 (CCPA 1969), cert. denied, 397 U.S. 989 (1970). While the declaration of Dick Burnside (Paper No. 10, filed August 27, 1997), submitted by appellants during prosecution of parent application No. 08/683,807, alleges that "[t]here has been a long-felt need in the casino industry for a coin sorter of the type purchased from Cummins-Allison [assignee of the instant application] in the past but with the additional advantage that it can be operated

with exact switching capability and without manual intervention into the batching process" (Burnside declaration, paragraph 9), appellants have provided no evidence that the problem was recognized in the art and that persons in the art tried and failed to solve the problem. Accordingly, the Burnside declaration is woefully inadequate as evidence of nonobviousness on the basis that the claimed subject matter satisfies a long-felt, unsolved need.

The Burnside declaration (paragraphs 6 and 7) also points out two advantages of the "external switcher" (disposed external to the sorting head and disc) of the claimed coin sorter which are allegedly not exhibited by "internal switcher" mechanisms (disposed within the confines of the sorting head and disc). First, the external switching arrangement permits the sorters to be purchased with or without the external switchers and later upgraded or retrofitted with one or more additional switchers. Second, it is declarant's "understanding" that the external switchers are more precise than internal switchers. However, even assuming that these advantages are exhibited by the claimed invention, it appears to us that the external diverter mechanism of Black also possesses both of these characteristics and appellants have submitted no evidence that this is not the case.³ Additionally, the fact that appellants have recognized other advantages which flow naturally from following the suggestion of the prior art

³ When an article is said to achieve unexpected (i.e. superior) results, those results must logically be shown as superior compared to the results achieved with other articles. Moreover, an applicant relying on comparative tests to rebut a prima facie case of obviousness must compare his claimed invention to the closest prior art. In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

cannot be the basis for patentability when the differences would have otherwise been obvious.

See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Int. 1985).

Moreover, evidence of secondary considerations, even when present, are but a part of the "totality of the evidence" that is used to reach the ultimate conclusion of obviousness. See Richardson-Vicks Inc. v. Upjohn Co., 122 F.3d 1476, 1483, 44 USPQ2d 1181, 1187 (Fed. Cir. 1997).

After reviewing all of the evidence before us, including the totality of the appellants' evidence, it is our conclusion that, on balance, the evidence of nonobviousness fails to outweigh the evidence of obviousness discussed above and, accordingly, the subject matter of claim 49 would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103 at the time the appellants' invention was made. See Id.

CONCLUSION

To summarize, the decision of the examiner to reject claim 49 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

NEAL E. ABRAMS
Administrative Patent Judge

LAWRENCE J. STAAB
Administrative Patent Judge

JENNIFER D. BAHR
Administrative Patent Judge

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Appeal No. 1999-1536
Application No. 08/938,592

Page 13

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